

The Plan • 3



MANAGEMENT ZONES

Management zones prescribe how different areas of the National Lakeshore will be managed. Each management zone specifies complementary natural resource conditions, cultural resource conditions, opportunities for visitor experiences, and appropriate facilities. Four management zones have been developed for the National Lakeshore — the high use zone, the experience history zone, the recreation zone, and the experience nature zone. In every management zone, the Lakeshore intends to preserve and protect natural and cultural resources to the greatest extent possible given available funds. The management zones table (table 1) describes the conditions, opportunities, and services that apply to each management zone. The management zones are listed in order from most intensive management (high use zone) to least intensive management (experience nature zone).

The cultural resource treatments mentioned in table 1 on pages 36-37 are defined as follows:

Preservation is the act or process of applying the measures necessary to sustain the existing form, integrity, and materials of a historic property. Work, including preliminary measures to protect and stabilize the property, generally focuses on ongoing maintenance and repair of historic materials and features rather than extensive replacement and new construction.

Rehabilitation is the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features that convey its historical, cultural, or architectural values.

Restoration is the act or process of accurately depicting the form, features, and character of a property as it appeared at a particular period of time by removing features from other periods in its history and reconstructing missing features from the restoration period.



Sleeping Bear Point Lifesaving Station (Maritime Museum) (left)
Glen Haven General Store (below)



MANAGEMENT ZONE DESCRIPTIONS



High Use Zone

This management zone provides for visitor orientation, education, and other structured activities (such as ranger-led tours). High numbers of visitors enjoy and learn about the National Lakeshore. This zone also supports the Lakeshore's main administrative and operational facilities. Wilderness does not occur in this zone.

Experience History Zone

This management zone is managed primarily to preserve historic structures and landscapes. Moderate to high numbers of visitors enjoy and learn about significant historic activities, buildings, and landscapes. Wilderness does not occur in this zone.

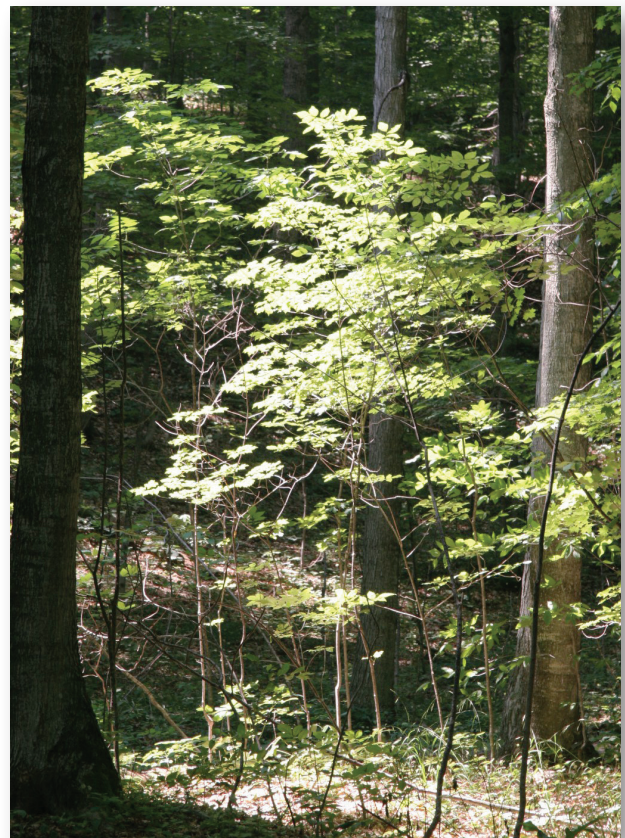


MANAGEMENT ZONE DESCRIPTIONS



Recreation Zone

This management zone provides a wide range of recreational opportunities for moderate numbers of visitors. The active Lake Michigan beach area is within this zone, as is the 0.25 mile of Lake Michigan waters within the National Lakeshore boundary. Wilderness does not occur in this zone.



Experience Nature Zone

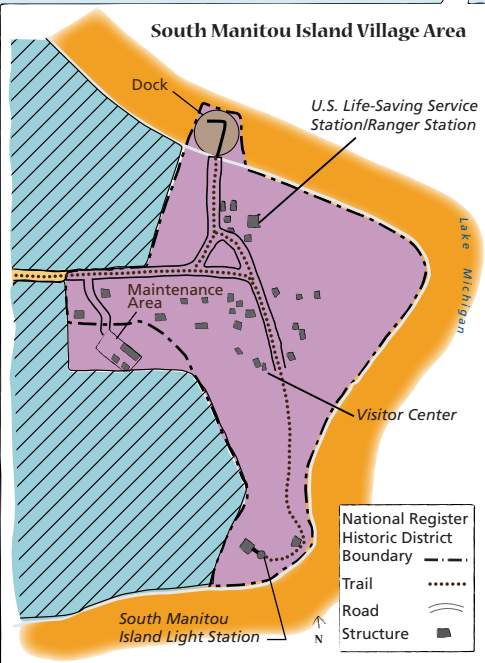
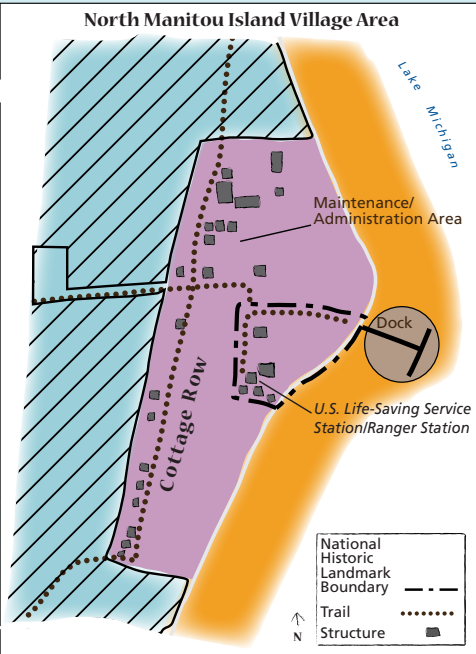
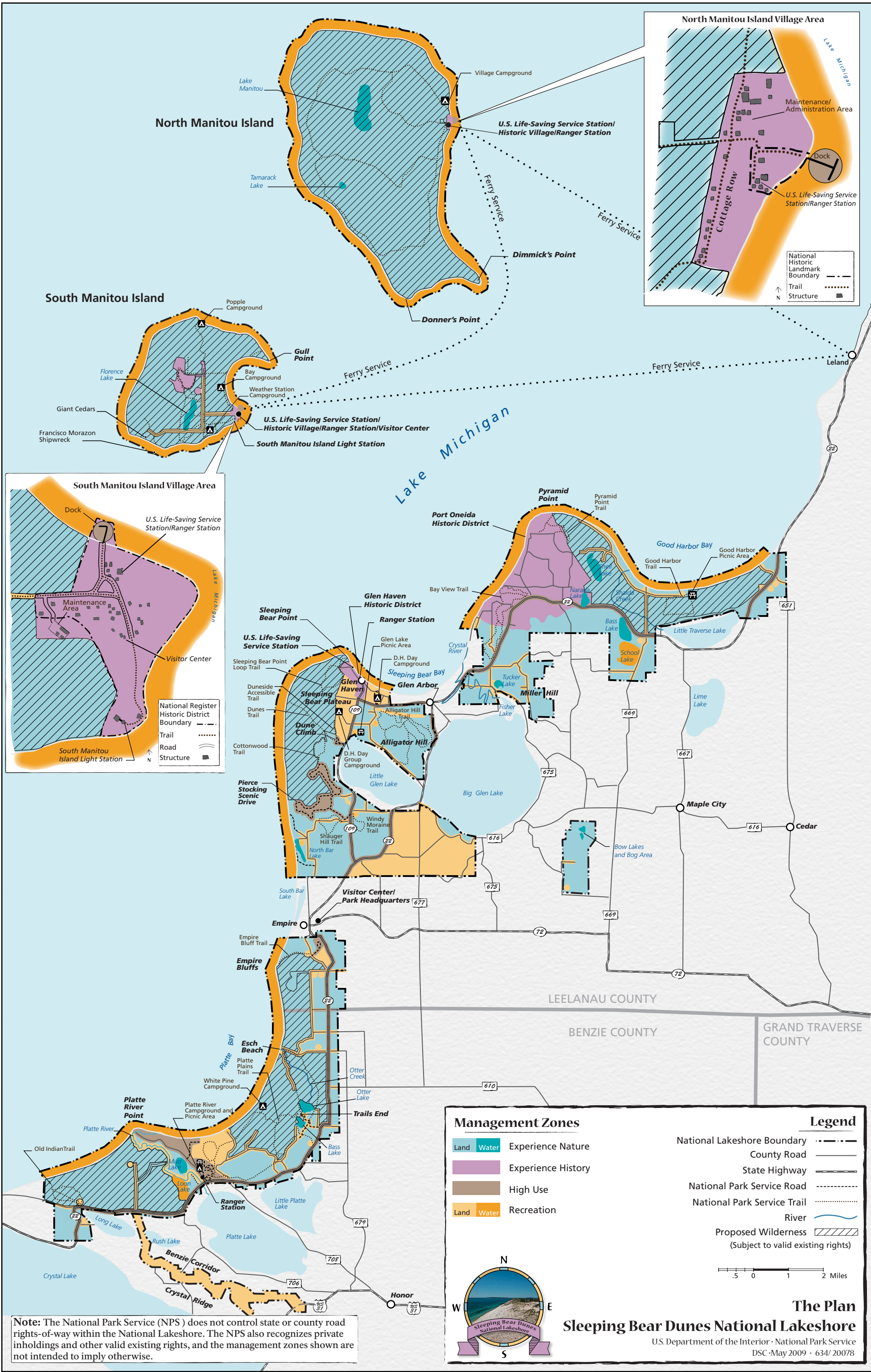
This is the wildest, most natural management zone. Low numbers of visitors enjoy primitive recreation on foot or in nonmotorized watercraft. Wilderness may or may not occur in this zone.

TABLE 1: MANAGEMENT ZONES

	High Use Zone	Experience History Zone
Overview	This management zone provides for visitor orientation, education, and other structured activities (such as ranger-led tours). High numbers of visitors enjoy and learn about the National Lakeshore. This zone also supports the Lakeshore's main administrative and operational facilities. Wilderness does not occur in this zone.	This management zone is managed primarily to preserve historic structures and landscapes. Moderate to high numbers of visitors enjoy and learn about significant historic activities, buildings, and landscapes. Wilderness does not occur in this zone.
Resource Conditions	This zone is characterized by high levels of recreational use in a modified natural environment. This developed zone may be located in previously disturbed areas or areas with relatively resilient natural resources that can be modified to support development with acceptable impacts. Natural resources may be modified to accommodate NPS operational facilities or high levels of visitor use. Cultural resource treatments in this zone may range from preservation to rehabilitation based on fundamental resources, national register significance, documentation, condition, interpretive value, and suitability for NPS operations. Cultural resources may be modified to accommodate NPS operational facilities or high levels of visitor use.	This zone is characterized by cultural resources set within a natural environment. Protecting and preserving cultural resources is a very high priority. In keeping with the focus on cultural resources, natural resources may be modified to preserve, rehabilitate, or restore cultural resources. Cultural resource treatments in this zone may range from preservation to restoration based on fundamental park resources, national register significance, documentation, condition, interpretive value, and suitability for NPS operations. Cultural resources may be modified to provide safe visitor access or to preserve them through adaptive use.
Visitor Opportunities	The easily accessed areas in this zone focus on a connection with and appreciation of special Lakeshore resources. Visitors are offered a variety of opportunities for orientation, interpretation, and education. Conveying Lakeshore themes to visitors is a priority. Common visitor activities may include viewing scenic vistas, taking short walks, picnicking, camping in developed campgrounds accessible by motor vehicles, swimming, boating, and attending interpretive programs. This zone is popular and well suited for family recreation. Self-sufficiency and knowledge of outdoor skills are not necessary. Time commitment varies, depending on information or services desired. High visitation levels are accommodated. Encounters with other visitors and Lakeshore staff are likely, especially around developed facilities.	The primary experience is visiting historic areas and learning about cultural history. Visitors are offered a variety of opportunities to understand and enjoy cultural resources. Common visitor activities may include sightseeing, guided walks, historic tours, educational programs, hiking, hunting, cross-country skiing, snowshoeing, and enjoyment of the cultural setting. Self-sufficiency and knowledge of outdoor skills are not necessary. The time commitment is typically one to two hours, but longer on the islands due to travel time from the mainland. Moderate to high visitation levels are accommodated. Encounters with other visitors and Lakeshore staff are likely, especially at points of interest. Encounters may be fewer in larger districts and open areas.
Facilities and Commercial Services	New and existing park roads and trails may be accommodated. State highway and county road rights-of-way may be in this zone. Developments may be used for visitor or administrative purposes. Appropriate kinds of facilities may include visitor centers, visitor contact stations, museums, roads, parking areas, trailheads and trails, developed campgrounds, surfaced walkways, picnic areas, restrooms, and Lake Michigan and inland lake boat ramps or docks. Appropriate kinds of operational facilities include administrative offices, employee housing, and maintenance areas. Appropriate commercial services may include convenience concessions, shuttle services, boat rentals, and guided services, such as vehicle and bicycle tours.	New and existing park roads and trails may be accommodated. State highway and county road rights-of-way may be in this zone. Developments include groupings of historic structures and related landscape elements such as orchards, fields, and cemeteries. Other developments are unobtrusive and fit with the cultural landscape. Appropriate kinds of facilities may include visitor contact stations, roads, museums, parking areas, surfaced walkways, restrooms, trailheads and trails, and picnic areas. Appropriate kinds of operational facilities include administrative offices, employee housing, and maintenance areas. Appropriate commercial services may include limited convenience concessions, shuttle services, and guided services such as vehicle and bicycle tours.

TABLE 1: MANAGEMENT ZONES (CONT.)

Recreation Zone	Experience Nature Zone	
<p>This management zone provides a wide range of recreational opportunities for moderate numbers of visitors. The active Lake Michigan beach area is within this zone, as is the 0.25 mile of Lake Michigan waters within the National Lakeshore boundary. Wilderness does not occur in this zone.</p>	<p>This is the wildest, most natural management zone. Low numbers of visitors enjoy primitive recreation on foot or in nonmotorized watercraft. Wilderness may or may not occur in this zone.</p>	Overview
<p>This zone's character is natural overall; alterations are designed to blend with the natural landscape. Protecting and preserving natural resources is a high priority. Natural resources may be modified to provide for a variety of compatible recreational activities. Cultural resource treatments in this zone may range from preservation to rehabilitation based on fundamental park resources, national register significance, documentation, condition, interpretive value, and suitability for NPS operations. Cultural resources may be modified to provide for a variety of compatible recreational activities.</p>	<p>This zone's character is natural overall; alterations are minimal and designed to blend with the natural landscape. Protecting and preserving natural resources is a very high priority. Natural resources may be modified to provide safe visitor access or reduce the overall level of resource impacts. Cultural resources within the zone will be preserved, but may be modified to preserve or restore natural resources.</p>	Resource Conditions
<p>Generally, the experience is rustic and there is a sense of being in a natural landscape. Visitors enjoy a wide range of recreational activities. Common visitor activities may include scenic driving, hiking, backpacking, motorized and nonmotorized boating, bicycling on roads and designated trails, hunting, fishing, horseback riding on designated trails, cross-country skiing, snowshoeing, camping, beach-going, and swimming. Self-sufficiency and knowledge of outdoor skills are typically not necessary (except for backpacking and camping on the islands). The time commitment ranges from about 30 minutes to more than a day (for camping). On the islands, this zone requires a longer time commitment. Moderate visitation levels are accommodated. Encounters with other visitors and Lakeshore staff are likely at trailheads, points of interest, and river access sites. The number of encounters may be moderate along major trails and rivers. Solitude can usually be found if sought.</p>	<p>There is a sense of being in a primitive, natural landscape. Visitors enjoy natural surroundings on foot or in nonmotorized watercraft. Common visitor activities may include hiking, nonmotorized boating, backpacking, hunting, fishing, horseback riding on designated trails, cross-country skiing, snowshoeing, beach-going and swimming, and backcountry camping. Nonmotorized exception: electric motors will be allowed on Bass Lake (Leelanau County), Tucker Lake, and Otter Lake to increase the range of visitor opportunities that are compatible with the intent of this zone. Typically, the amount of time, outdoor skill, and self-reliance needed is greater than for other zones. This is especially true on the islands. Lower visitation levels are accommodated. Encounters with other visitors and Lakeshore staff are generally few, although there may be pulses of visitor activity near trailheads and other entry points. Opportunities for solitude are plentiful.</p>	Visitor Opportunities
<p>New and existing park roads and trails may be accommodated. County road rights-of-way may be in this zone. Developments are unobtrusive and fit in with the natural environment. Appropriate kinds of facilities may include roads, trailheads and trails, primitive or rustic campgrounds, parking areas, primitive toilets, picnic areas, inland water boat docks and launches, and information kiosks. Appropriate kinds of operational facilities include employee housing. Appropriate commercial services may include boat rentals and guided services such as hunting, fishing, hiking, bicycling, and horseback riding.</p>	<p>There are no active roads in this zone. However, county road rights-of-way that have not been developed, or that are being used as trail corridors, may be in this zone. Developments are limited to those necessary for protecting resources or for safety purposes. Appropriate kinds of facilities may include trails, backcountry campsites or campgrounds, primitive toilets, and special trail surfaces in localized areas (e.g., sand ladders to protect sensitive dunes or raised planking to protect wet areas). There are no operational facilities in this zone. Appropriate commercial services may include nonmotorized boat rentals and guided services such as hunting, fishing, horseback riding, and hiking.</p>	Facilities and Commercial Services



Management Zones

Land	Water	Experience Nature
		Experience History
		High Use
Land	Water	Recreation

Legend

National Lakeshore Boundary	County Road
State Highway	National Park Service Road
National Park Service Trail	River
Proposed Wilderness (Subject to valid existing rights)	

The Plan

Sleeping Bear Dunes National Lakeshore

U.S. Department of the Interior · National Park Service
DSC · May 2009 · 634/ 20078

DESCRIPTION OF THE PLAN

OVERALL VISION

The Lakeshore is valued primarily for preservation of its natural resources, and for the opportunities it provides for visitor enjoyment of natural, cultural, and recreational resources in a scenic outdoor setting. The Lakeshore will be managed according to the following management zones: 67% experience nature, 25% recreation, 5% experience history, and 3% high use. The plan was determined through a planning process that included public involvement. A map of the plan is located on pages 38-39 and also in the back pocket of this document.

WILDERNESS

Approximately 32,557 acres (46% of the National Lakeshore) in the north, central, south, and island areas of the Lakeshore are being proposed as wilderness. No developed county roads are within areas proposed for wilderness. None of the Lake Michigan active beach zone is in areas proposed for wilderness. The acreage figures for wilderness are estimates based on small-scale maps; the specific acreage for the wilderness proposal will be refined prior to legislation using detailed, large-scale maps. For more information see Chapter 4 “Wilderness Study and Proposal.”

NATURAL RESOURCES

The purpose of the National Lakeshore is to

preserve outstanding natural features, including forests, beaches, dune formations, and ancient glacial phenomena in their natural setting, and protect them from developments and uses that will destroy the scenic beauty and natural character of the area, for the benefit, inspiration, education, recreation, and enjoyment of the public

In keeping with this purpose, 67% of the National Lakeshore is zoned experience nature. Natural resource management programs that will occur are outlined in the previous “Desired Conditions and Strategies” section of chapter 2. Examples include controlling invasive species, restoring disturbed sites, protecting open dune areas, and protecting threatened and endangered species. In the back pocket of this document there is a base map of the natural resources.

CULTURAL RESOURCES

Cultural resources can be found in each of the four management zones. All historic structures and landscapes will be preserved at a minimum and managed as specified for the management zone in which they lie. See table 2 (facing page) for the range of treatments for the primary historic properties in the Lakeshore. In the back pocket of this document there is a map of the prominent cultural resources. The experience history zone is managed primarily to preserve historic structures and landscapes and provide visitors the opportunity to enjoy and learn about them. All of the fundamental historic resources are within the experience history zone: Glen Haven Village Historic District, Sleeping Bear Point Life-Saving Station, North Manitou Life-Saving Station, South Manitou Island Lighthouse Complex and Life-Saving Station Historical District, and the Port Oneida Rural Historic District.

TABLE 2: RANGE OF TREATMENT FOR HISTORIC PROPERTIES IN THE PLAN

Treatment	Preservation	Rehabilitation	Restoration
FUNDAMENTAL HISTORIC RESOURCES			
Sleeping Bear Point Life-Saving Station (4) ^a	•	•	•
North Manitou Life-Saving Station (8) ^a	•	•	•
South Manitou Island Lighthouse Complex and Life-Saving Station Historical District (13) ^a	•	•	•
Glen Haven Village Historic District (15) ^a	•	•	•
Port Oneida Rural Historic District (121) ^a (18 farms)	•	•	•
SUBTOTAL (161)			
OTHER HISTORIC RESOURCES			
North Manitou Island Village (Manitou Island Association) (10) ^a	•	•	•
North Manitou Island Village (Cottage Row) (13) ^a	•	•	•
North Manitou Island Westside Barn (1) ^a	•		
Bournique Cabin (4) ^a	•		
South Manitou Island Loop (Schoolhouse, August Beck farm, G.C. Hutzler farm) (13) ^a	•	•	•
South Manitou Island non-farm loop (G. J. Hutzler farm, T. Beck farm) (5) ^a	•		
Remainder of South Manitou Island Village (9) ^a	•	•	•
Bufka Farm (8) ^a	•	•	
Kropp Farm (5) ^a	•	•	
Eitzen Farm (7) ^a	•	•	
Shalda Log Cabin (1) ^a	•	•	
Tweddle School (1) ^a	•	•	
Pelky Barn (1) ^a	•	•	
Treat Farm (9) ^a	•		
Esch Farm (1) ^a	•	•	
Lyle Schmidt Farm (3) ^a	•		
Tweddle Farm (6) ^a	•	•	
Boekeloo Log Cabin (2) ^a	•	•	
Ken-Tuck-U Inn (3) ^a	•	•	
SUBTOTAL (102)			
TOTAL (263)			
Figures refer to numbers of structures.	206 (78%)		
	35 (13%)		
	22 (08%)		

^a Number of buildings at each property. All landscapes are preserved. Numbers do not include other landscape features such as fence rows, cemeteries, sidewalks, etc.

Note: The shading in the table above reflects the management zone and the possible treatment range. (There are no historic properties in the high use zone.)

	experience history zone (allows for preservation, rehabilitation, or restoration)
	recreation zone (allows for preservation or rehabilitation)
	experience nature zone (allows for preservation)

Glen Haven — The Glen Haven Historic District and Sleeping Bear Point Life-Saving Station will be preserved, rehabilitated, or restored. Some buildings will be rehabilitated for visitor and/or staff use. The Sleeping Bear Inn and garage will be placed in the NPS historic leasing program to allow rehabilitation for adaptive use. All other structures will be stabilized and maintained in their current condition.

Port Oneida — Historic structures and landscapes will be preserved, rehabilitated, or restored. Structures on at least one farmstead will be restored for interpretive purposes. Some buildings in the historic district will be rehabilitated for visitor and/or staff use, including a visitor contact station and staff housing. At least one farmstead will be placed in the NPS historic leasing program to allow rehabilitation and adaptive use. All other structures and landscapes will be stabilized and maintained in their current condition.

North Manitou Island — The historic life-saving station, Cottage Row, and Manitou Island Association structures and landscapes will be preserved, rehabilitated, or restored. Historic structures and landscapes elsewhere on the island will be preserved.



Cottage Row on North Manitou Island

South Manitou Island — The historic life-saving station, lighthouse complex, village, schoolhouse, and the farm loop tour structures and landscapes will be preserved, rehabilitated, or restored. Structures and landscapes elsewhere on the island will be preserved.

Other Mainland Historic Structures and Landscapes — Historic structures and landscapes will be managed as specified for the management zone in which they lie. Various farmsteads, farm fields, and other historic elements that are either adjacent to Highway M-22 or where there is minimal conflict with the adjacent experience nature zone are zoned recreation to allow for preservation as “scene setters” or possible adaptive use/rehabilitation by partners or the National Park

Service. Examples include the Boekeloo cabin and immediate landscape, the Ken-Tuck-U-Inn and immediate landscape, Tweddle School, the Tweddle farmstead, the Bufka farmstead and surrounding open fields, and the Eitzen and Kropp farmsteads.

VISITOR ORIENTATION, INTERPRETATION, AND EDUCATION

Visitor orientation services will continue at the NPS visitor center in Empire, at Glen Haven, and at the visitor contact station on South Manitou Island. Interpretation activities will continue throughout the Lakeshore, with special emphasis at the Dune Climb, the major campgrounds, Port Oneida, Glen Haven, and Sleeping Bear Point Maritime Museum. A variety of interpretive and educational programs (guided hikes, summer and school programs, etc.) will continue.

On South Manitou Island, concession-operated farm loop tours will continue. Provided there is demand and the service is economically feasible, concession auto tours to near the Giant Cedars will be allowed to the end of the county-owned road; from there, tours will continue on foot for a short distance to the trees. User capacity management strategies (e.g., education, supervision by tour leaders, fences, and/or boardwalks) will be implemented as needed to prevent visitor use-related impacts to the cedar trees and surrounding vegetative community.

VISITOR FACILITIES, OPPORTUNITIES, AND ACTIVITIES

Opportunities for experiencing solitude and natural quiet will abound in many areas of the Lakeshore. Opportunities for recreational activities such as hiking, backpacking, fishing and hunting, paddling, cross-country skiing, and backcountry camping will be facilitated or expanded as described below:

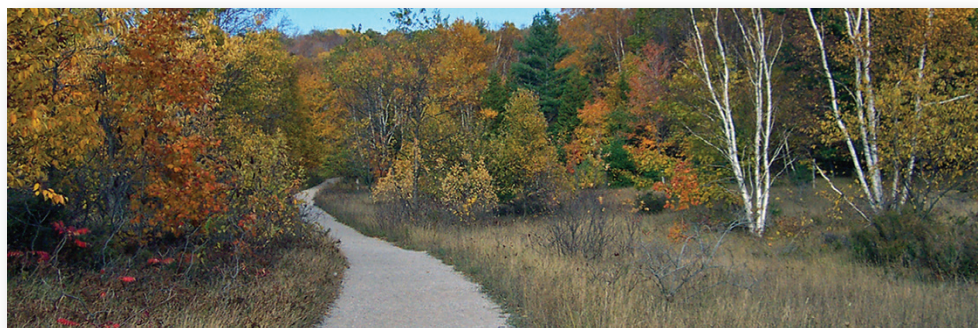
Roads — Roads will remain essentially the same. The primary vehicle travel corridors through the National Lakeshore are state roads M-22 and M-109. Most other roads in the National Lakeshore are managed by Benzie or Leelanau counties. Some of these roads provide access to Lake Michigan beaches or other Lakeshore features, while others provide access to private property. A few roads are owned and managed by the National Park Service. Most notably, these include the Pierce Stocking Scenic Drive, in the central portion of the Lakeshore, and Tiesma Road, accessing a Lake Michigan beach near the Platte River in the south part of the National Lakeshore.

All developed county-owned road corridors are zoned recreation to recognize continued vehicular, recreational, and other uses (including bicycling).¹ The M-22 and M-109 road corridors are zoned high use to acknowledge continued vehicular use of these state transportation routes. To allow for a possible future M-22/M-109 hike/bike trail, the width of the high use zone along these corridors is 300 feet on each side of the highway centerline (on NPS-owned lands only). Within these corridors wherever the land is not needed for the hike/bike trail, the high use zone will revert to the width of the M-22 or M-109 right-of-way and lands outside the right-of-way will revert to the adjacent management zone. The high-use zoning does not imply the acquisition of private lands for the hike/bike trail development. Pierce Stocking Scenic Drive is zoned high use to allow for high levels of visitor use and interpretive activities.

Trails — The National Lakeshore includes more than a dozen trails and trail systems, ranging in length from just over a mile to nearly 15 miles. The trails vary in terrain and habitat. There are about 54 miles of maintained trails on the mainland and nearly another 50 miles of trails on the two Manitou Islands. Trails will remain the same with a few additions.



A moment of solitude at Empire Bluffs



Hiking through autumn forests

¹ County- and state-owned road rights-of-way are not controlled by the National Park Service. Showing county-owned road rights-of-way within the recreation management zone and state-owned right-of-way in the high use management zone is not intended to suggest otherwise, but rather to indicate continued use under management by the counties or the state.

A hike/bike trail located primarily along M-22 and M-109 may be developed at the initiative of partners; a separate study will be needed to make certain that such a trail will have no significant impact. Several candidate areas for the hike/bike trail that are zoned recreation (an area near M-109 on the north edge of Alligator Hill; the Wilco Hill area south of Glen Haven, north of the Dune Climb and west of M-109; corridors or two-tracks east of the Pierce Stocking Scenic Drive; the area southeast of the Lakeshore's Empire maintenance area and west of M-22; and the area between Peterson Road and north of Platte River Campground) will revert to experience nature if they are not needed for the M-22/M-109 hike/bike trail (except for county roads and the D. H. Day Group Campground, which will retain the recreation zone).

A "bay-to-bay" trail for hikers and Lake Michigan paddlers will parallel the mainland shoreline within the Lakeshore; on land, this trail will make use of active beach areas or existing disturbed areas and corridors to the extent possible. A loop hiking trail and trailhead parking area will be provided at Bow Lakes. Various trailhead areas are zoned recreation to allow for trailhead parking.

Campgrounds — As described below, campgrounds and camping will remain essentially the same, with a few exceptions.

The Platte River Campground, in the south portion of the National Lakeshore, is the most developed campground in the Lakeshore. Amenities include paved roads, showers, flush toilets, water, a few sites with electrical hook-ups, and a canoe launch. The campground includes walk-in and group sites. Campsites can be reserved in advance.

The D. H. Day Campground, in the central part of the National Lakeshore mid-way between Glen Haven and Glen Arbor, is more rustic. It has potable water, a small amphitheater, a nature center, vault toilets, dirt roads, and beach access. Campsites are assigned on a first-come, first-served basis.

A group campground is located northwest of Little Glen Lake. This campground is referred to as the D. H. Day Group Campground, but it is separate from the D. H. Day Campground referred to above.

There are two backcountry campgrounds on the National Lakeshore's mainland. White Pine campground is on the Platte Plains Trail system near the Platte River campground, within walking distance of Lake Michigan.

Valley View Campground is northeast of Glen Arbor. This campground has no potable water service and receives relatively little use. It will be abandoned, and the area will be returned to more natural conditions. Also, four or five new small, primitive campgrounds will be constructed an easy day's hike or paddle along the bay-to-bay trail (see "Trails" above).

On South Manitou Island, camping is allowed at three designated campgrounds; backcountry permits are required. On North Manitou Island, dispersed backcountry camping is currently allowed in most areas (special restrictions apply and backcountry permits are required) and at the Village Campground. However, new designated campgrounds will be provided where necessary to confine and address natural resource impacts.

Lake Michigan Beach Access — Numerous Lake Michigan beaches are accessible by motor vehicle at various points within the National Lakeshore, and they will remain so. Some beach access areas will be improved.

To address resource impacts and safety concerns at the Esch Beach road end, parking and vehicular circulation will be improved. The beach access area at the end of Lake Michigan Road near the mouth of the Platte River will be zoned high use to allow for parking improvements; a separate study would examine the appropriateness of these developments in more detail.

Lake Michigan Boat Access — The area around Lake Michigan Road (in Benzie County, near the Platte River) is zoned high use to recognize the relatively high level of use that occurs along the road, at Platte Point, and around the Platte River Campground and picnic area. The high use zone extends to the northeast towards Tiesma Road to allow for a new Lake Michigan boat ramp or dock in this area, although a new boat ramp or dock is not proposed by the National Park Service. A separate study will be needed to determine whether any such facility would be appropriate in this area. If such a study indicated that a new boat ramp or dock was not appropriate here, the high use zone beyond the Lake Michigan Road area would revert to the experience nature zone, and Tiesma Road would revert to the recreation zone. NPS-owned Tiesma Road will remain open in any event.

Lake Michigan beach areas and the 0.25-mile-wide strip of Lake Michigan within the National Lakeshore boundary are zoned recreation to allow continued access by watercraft (except personal watercraft/jet skis).

Inland Lake Use and Access — School Lake and Loon Lake are zoned recreation to permit continued motorboat and other recreational uses. To improve visitor experiences for nonmotorized uses (canoeing, kayaking, fishing, and swimming), motorboats will no longer be allowed on North Bar Lake. To increase the range of visitor opportunities that are compatible with the intent of the experience nature zone, electric motors will be allowed on Bass Lake (Leelanau County), Tucker Lake, and Otter Lake. Access for boats will be improved at a few inland lakes (locations to be determined).

Picnic Areas — Existing picnic areas will remain. This includes the Platte River, Glen Lake, and Good Harbor picnic areas. Picnic tables are also available at the Dune Climb, North Bar Lake, Glen Haven, Pierce Stocking Scenic Drive, and a few other locations within the Lakeshore. Little Glen Lake picnic area will be improved to facilitate beach and picnic use; the sand area along the beach will be expanded and flush toilets may be constructed.



*Far left: Dune Climb picnic area
Left: North Manitou Island ferry*

Ferry Service — Ferry service for day and overnight stays on South Manitou Island and overnight stays on North Manitou Island will continue. Day ferry trips to North Manitou Island (once or twice a week, not daily) will be allowed provided there is demand and the service is economically feasible. The intent is to allow a different segment of visitors to experience this island.

Boat Access for River Use — Motorized and nonmotorized watercraft use along the Platte and Crystal rivers will continue. The Platte River is zoned recreation to permit moderate levels of recreational use, including use of motorboats. To address natural resource impacts (trampling, erosion of gravel into the river, etc.), the Crystal River access area will be upgraded or relocated, and a small parking area will be provided.



Dune Climb

Dune Climb — The Dune Climb will remain essentially the same; it is zoned high use to allow for high levels of visitor use and interpretive activities. Facilities include an entrance station, large paved parking area, picnic tables, Dune Center (bookstore and restrooms), and food and beverage vending area.

Bicycle Use — Bicycle use will continue to be allowed on roads used by motor vehicles, but not on hiking trails. An exception will be that as part of the M-22/M-109

hike/bike trail, bicycle use will be evaluated for portions of the Bay View Trail immediately adjacent to the M-22 corridor. Bicycle use will be evaluated for expansion in zones that permit it (recreation, high use, and experience history). The wooded area (“Burnham Woods”) south of the Glen Lakes and east of M-22 is zoned recreation to allow consideration for a possible future designated mountain bike trail system.

Hang Gliding — Hang gliding will continue to be allowed at designated sites within the Lakeshore.

Maintenance Facility Area — The Lakeshore’s maintenance facility area, located just south of Empire, is zoned high use, which allows for the Lakeshore’s main administrative and operational facilities.

Benzie Corridor

The Benzie Corridor is zoned recreation to allow for a future scenic road per the Lakeshore’s enabling legislation, and/or a hike/bike trail (evaluated and determined via a future study). The Benzie Corridor will remain within the Lakeshore’s legislated boundary. Future managers have the flexibility to study and determine, based on public input and other best available information at the time, whether a scenic road or hike/bike trail (or both) should be built within the corridor.²

The National Park Service will continue to acquire lands within the corridor on a willing-seller basis (subject to available funding). Development of a scenic road or hike/bike trail is likely decades off into the future, and is not expected to be built within the life of this plan.

² The NPS vision of the scenic road at the time of this writing is as follows. The road will provide an identifiable southern entrance to the National Lakeshore. It will include an interchange on US-31. From there it will continue in a generally northwesterly direction along the Crystal Ridge to an intersection with M-22. The road will provide scenic variety and offer outstanding scenic views of Lake Michigan, Empire Bluffs, Platte Lake, and Crystal Lake. Complementary facilities along the scenic road will likely include an entrance station, scenic overlooks, picnic areas, restrooms, and hiking and biking trails. The road will likely be similar to Pierce Stocking Scenic Drive, only with two-way traffic. It will be closed to commercial traffic.



Hang gliding is allowed at designated sites within the Lakeshore

Bow Lakes

A small parking area and a loop hiking trail will be provided to facilitate visitor use (including nature observation and backcountry hiking) on NPS-owned lands. The National Park Service will acquire properties within this area of the Lakeshore on a willing-seller basis as they become available (subject to available funding).

STAFFING AND COSTS

The staffing level needed to implement the plan is estimated at the work-year equivalent of 79 full-time staff members. However, volunteers and partnerships will continue to be key contributors to NPS operations.

One-time capital costs of the plan are estimated at \$17.5 million.³ This includes projects that are planned for the near future or are underway, new construction, and nonfacility costs such as major resource plans and projects. Examples include new trails and campgrounds, picnic area improvements, improved access for nonmotorized boats at

inland lakes and rivers, and historic preservation/ rehabilitation/ restoration (various areas). Deferred maintenance costs of the plan are estimated at \$15.4 million. The total cost of the plan (one-time capital costs plus deferred maintenance costs) is estimated at \$32.9 million. Annual operating costs will be about \$4.4 million.

Presentation of these costs does not guarantee future NPS funding. Project funding will not come all at once; it will likely take many years to secure and may be provided by partners, donations, or other nonfederal sources. Although the National Lakeshore hopes to secure this funding and will prepare itself accordingly, the Lakeshore may not receive enough funding to achieve all approved actions within the timeframe of the *General Management Plan* (the next 20 or more years).

³ The cost estimates provided here are not to be used for budgeting purposes. Although the numbers appear to be absolutes, they represent a midpoint in a possible range of costs.

USER CAPACITY (CARRYING CAPACITY)

OVERVIEW

General management plans for national park system units, including national lake-shores, must address user capacity management. The National Park Service defines user capacity as the type and level of use that can be accommodated while sustaining the quality of a park unit's resources and visitor opportunities consistent with the purposes of the park unit.

User capacity management involves establishing desired conditions, monitoring, evaluating, and taking actions (managing visitor use) to ensure that park unit values are

protected. The premise is that with any use on public lands comes some level of impact that must be accepted; therefore it is the responsibility of the National Park Service to decide what level of impact is acceptable and what management actions are needed to keep impacts within acceptable limits. Instead of just tracking and controlling user numbers, NPS staff manage the levels, types, and patterns of visitor use and other public uses as needed to preserve the condition of the resources and quality of the visitor experience.



Arriving at North Manitou Island

ence. The monitoring component of this process helps NPS staff evaluate the effectiveness of management actions and provides a basis for informed management of public use.

The user capacity management process can be summarized by the following major steps:

1. Establish desired conditions for resources and visitor experiences (through management zoning).
2. Identify indicators (things to monitor to determine whether desired conditions are being met, e.g., soil loss, vegetation damage).
3. Identify standards (limits of acceptable change) for the indicators.
4. Monitor indicators to determine if there are disturbing trends or if standards are being exceeded.
5. Take management action to maintain or restore desired conditions.

With limited staffs and budgets, NPS managers must focus on areas where there are definite concerns and/or clear evidence of problems. This means monitoring should generally take place where conditions are approaching or violate standards, conditions are changing rapidly, specific and important values are threatened by visitation, and/or the effects of management actions taken to address impacts are uncertain.

The *General Management Plan* addresses user capacity in the following ways:

- It outlines management zones that provide the foundation for user capacity management. The management zones prescribe desired resource conditions, visitor experience opportunities, and types of facilities to support the resource conditions and visitor experiences for different areas.
- It describes the Lakeshore's most pressing use-related resource and visitor experience concerns. This helps NPS managers focus limited resources on specific potential indicators and determine what kinds of baseline information to collect.
- It identifies potential indicators that could be monitored as needed in the future to determine if desired conditions are not being met due to unacceptable impacts from public use. As National Lakeshore managers collect more detailed information on use-related concerns, specific indicators will be selected for monitoring, and corresponding standards (limits of acceptable change) will be identified.
- It outlines representative examples of management actions that might be used to avoid or minimize unacceptable impacts from public use.
- It identifies specific geographic areas for special monitoring attention.
- It calls for a wilderness management plan to be completed soon after wilderness designation (if any).

The last steps in the user capacity process, which will continue indefinitely, involve monitoring the National Lakeshore's indicators and taking management actions as needed to minimize impacts. As a means for providing flexibility in the face of changing conditions, National Lakeshore managers will use an adaptive management approach when appropriate. (Adaptive management is a management system based on clearly identified outcomes, monitoring to determine if management actions are meeting outcomes, and if not, making changes that will best ensure that outcomes are met or that outcomes are reevaluated.) If new use-related resource or visitor experience concerns arise in the future, additional indicators and standards will be identified as needed to address these concerns.

OVERVIEW OF CURRENT AND POTENTIAL USE-RELATED IMPACTS

This section discusses existing and potential use-related impacts that may occur in the National Lakeshore, challenging the National Park Service's ability to manage for the desired conditions outlined in the *General Management Plan*.

Existing facilities in the Lakeshore generally support enjoyable visitor opportunities and protect resources, and based on projected trends will continue to function fairly well. Beach access parking areas, the Dune Climb parking area, and campgrounds sometimes fill to capacity during the summer. As a result, visitors may be frustrated in trying to reach certain areas of the Lakeshore and may park in or use nondesignated areas. In addition to the associated impact on the visitor experience, using nondesignated areas may cause impacts such as vegetation loss, erosion, and introduction of invasive species, particularly in vulnerable areas.

In the summer, high volumes of use along the Platte River cause crowded conditions at times. Some people who commented during the GMP process expressed concern about this issue and its related impacts (e.g., bank erosion). If use increases or patterns of use change, crowding on the Platte River may worsen and/or become more frequent. In addition to crowding, use on the Platte River is resulting in excessive impacts to the

Floating the Platte River



riverbanks and associated floodplains, such as proliferation of informal trails, erosion, vegetation damage and loss, litter, and improper disposal of human waste. Impacts on water quality (e.g., increased sedimentation, nitrates, and E. coli) on the rivers and inland lakes from visitor use are also a concern. In the future, use levels may also increase on the Crystal River and cause similar conditions during the busy summer season.

Visitor crowding does not currently seem to be a problem on trails. However, visitor encounter rates must remain low on trails in some areas to ensure that visitors' expectations for solitude and natural conditions are met.

Use levels on the islands are relatively low and are highly influenced by the capacity and timing of the island ferry. At this time, there do not seem to be any major crowding or use conflicts affecting visitor opportunities on the islands. Some resource-related impacts (e.g., proliferation of campsites, damage to vegetation, and improper human waste disposal) are associated with dispersed backcountry camping on North Manitou Island.

POTENTIAL USER CAPACITY INDICATORS AND RELATED MANAGEMENT ACTIONS

The following section outlines some potential indicators that may be monitored to better understand the magnitude and trends of the most pressing use-related concerns described in the previous section. The management zones for which each indicator is likely to be most relevant are identified, along with potential management actions to address resource and/or visitor experience concerns. Some management actions may not be appropriate in some management zones. Final selection of indicators and standards for monitoring purposes and implementation of management actions that affect use will comply with the National Environmental Policy Act (1969), Section 106 of the National Historic Preservation Act, and other laws and NPS management policies as appropriate.

Lake Michigan Shoreline



Potential user capacity indicators may include the following:

- Water quality (high use zone, recreation zone, experience nature zone)
Management actions that may be considered to avoid or minimize impacts to water quality include encouraging low-impact practices (e.g., Leave No Trace); directing use to designated areas or facilities; providing more waste disposal facilities; redistributing use to lesser used areas or off-peak times; cleaning equipment before entering waterways; and reducing/eliminating certain uses, activities, or equipment.
- Impacts to riverbanks, such as erosion, vegetation damage or loss, creation of informal trails (high use zone, recreation zone, experience nature zone)
Management actions that may be considered to avoid or minimize riverbank impacts include encouraging low impact practices; directing use to designated areas or facilities; providing more waste disposal facilities; increasing the number of signs to direct visitors to appropriate facilities; redistributing use to lesser used areas or off-peak times, rehabilitating some sites; and reducing use levels.
- Amount of litter (high use zone, recreation zone, experience nature zone, experience history zone)
Management actions that may be considered to avoid or minimize litter include encouraging personal responsibility for refuse disposal, providing more refuse disposal facilities, and directing use to designated areas or facilities.
- Improper human waste disposal (high use zone, recreation zone, experience nature zone)
Management actions that may be considered to prevent or minimize improper human waste disposal include encouraging proper waste disposal, providing more toilet facilities, directing use to appropriate facilities, and reducing use levels.
- Impacts to dunes (e.g., erosion, vegetation damage and loss, informal trails, invasive species) (recreation zone, experience nature zone, experience history zone)
Management actions that may be considered to prevent or minimize impacts to dunes include encouraging low-impact practices through information, directing use to designated areas or facilities, increasing the number of signs to direct visitors to appropriate access points, using erosion control techniques to stabilize problem areas, designating alternate access points, and reducing use levels.
- Impacts from backcountry camping, such as proliferation of user created campsites, increase in campsite size, tree damage, and improper human waste disposal (experience nature zone)
Management actions that may be considered to prevent or minimize impacts from backcountry camping include encouraging low-impact practices (e.g., Leave No Trace), directing use to designated campsites, providing information directing visitors to appropriate areas or facilities, providing information on how to select an appropriate campsite, better defining appropriate use areas, providing facilities to contain impacts (e.g., fire grates and privies), managing access to certain areas with natural barriers, redistributing use to lesser used areas or off-peak times, rehabilitating some sites, and reducing use levels.

- Failure of nesting piping plovers to raise young (recreation zone). Piping plovers are federally endangered shorebirds that prefer certain areas along Lake Michigan beaches for nesting.

Management actions that may be continued or considered to prevent or minimize impacts to piping plovers include providing information about the species and its habits, temporary fencing and closing nesting territories to discourage inadvertent trampling of nests or disturbance of the species, designating alternate access points, and establishing and enforcing dog closure areas.

- Overcrowding at beach parking areas (high use zone, recreation zone)

Management actions that may be considered to prevent or minimize these impacts include providing advanced planning information that encourages visitation to lesser used areas or at off-peak times, providing real-time information about parking availability, adding more parking or redesigning parking areas for greater efficiency, and closing areas when full and actively redistributing use to other sites.

- Crowding from high use levels on rivers (high use zone, recreation zone, experience nature zone)

Management actions that may be considered to prevent or minimize crowding on rivers include providing information on visitor etiquette, redistributing visitation to lesser used areas or off-peak times, and limiting the number of watercraft on the river.

- Vandalism and unintentional damage to historic structures (experience history zone, recreation zone)

Management actions that may be considered to prevent or minimize impacts to historic structures include providing more information on the sensitivity and value of the Lakeshore's cultural resources, hardening or protecting heavily used areas with special materials, increased ranger patrols in target areas, using remote video-monitoring, and directing use away from (or closure of) particularly vulnerable sites.

AREAS FOR SPECIAL MONITORING ATTENTION

Areas that have been identified for special monitoring attention include the following:

- Platte River, Crystal River, and associated riverbank areas
- dune areas near the Dune Climb and North Bar Lake
- Lake Michigan Overlook (Overlooks 9 and 10) on the Pierce Stocking Scenic Drive
- Piping plover nesting areas, especially those near visitor use areas
- Platte Point developed area
- White Pine backcountry campground
- popular camping areas on North Manitou Island

Platte River



IMPLEMENTATION OF THE PLAN

IMPLEMENTATION FUNDING

Although the *General Management Plan* provides the analysis and justification for future National Lakeshore funding proposals, the plan does not guarantee future NPS funding. Many actions would be necessary to achieve the desired conditions for natural resources, cultural resources, recreational opportunities, and facilities as envisioned in this plan. The National Park Service will request funding to achieve these desired conditions; although the National Lakeshore hopes to secure this funding and will prepare itself accordingly, the Lakeshore may not receive enough funding to achieve all desired conditions. Because NPS funding may be insufficient to accomplish the goals set by the plan, National Lakeshore managers will need to continue to pursue other options, including expanding the service of volunteers, drawing upon existing or new partnerships, and seeking alternative funding sources, including the philanthropic community. Many people care deeply about their national parks (and Sleeping Bear Dunes National Lakeshore in particular), and these people are likely to continue to offer assistance in meeting NPS goals that matter most to them. Many potential partner groups exist whose missions are compatible with that of the Lakeshore, and these groups are likely to offer to work with the Lakeshore for mutual benefit.

Even with assistance from supplemental sources, Lakeshore managers may be faced with difficult choices when setting priorities. The *General Management Plan* provides the framework within which to make these choices.

KEY IMPLEMENTATION PLANS TO FOLLOW THIS GENERAL MANAGEMENT PLAN / WILDERNESS STUDY

Wilderness Management

If Congress acts to designate wilderness within the National Lakeshore, a wilderness management plan will be developed. The wilderness management plan will guide NPS managers in the preservation, management, and use of areas designated as wilderness. The wilderness management plan will be developed with public input and will comply with the National Environmental Policy Act (1969) and other applicable laws and policies.

Asset Management

The National Park Service is developing a national program for managing structures and facilities (assets) in parks. This program calls for development of an asset management plan for each park unit. Such plans are designed to provide park managers with a means of prioritizing, scheduling, and funding maintenance and repair work. They also include techniques to manage gaps between needed and anticipated funding, such as “mothballing” or even disposing of lower priority assets. The Lakeshore’s asset management plan will follow the guidelines of the national program, including guidance for compliance with the National Environmental Policy Act, Sections 106 and 110 of the National Historic Preservation Act, and other applicable laws and policies.

Ethnographic Resources Study/Assessment

The National Lakeshore will conduct ethnographic studies to formally identify groups of people with traditional associations to park lands and waters. This is a key step toward ensuring that ethnographic resources are protected.

